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EXAMINER	
KIM, DAVID S	

ART UNIT	PAPER NUMBER
2613	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/767,401	MOSTERT ET AL.	
	Examiner	Art Unit	
	David S. Kim	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12,19-25,28-34,42-44,54-58,60,62 and 66* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,19-25,28-34,42-44,54-58,60,62 and 66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Applicant's response to the objections to the drawings in the previous Office Action (mailed on 01 February 2007) is noted and appreciated. Applicant cancelled claims 64-65, which renders the previous objections moot.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

In claim 42, notice the following limitation:

"***broadcasting*** at least a portion of the downstream signal to ***a plurality of users*** and ***conveying a signal*** from at least ***one of the plurality of users*** to an input port of the another downstream combiner as the another upstream signal" (emphasis Examiner's).

According to this limitation, the drawings should show at least one user receiving a broadcast signal ***and*** conveying a signal to an input port of the another downstream combiner as the another upstream signal. However, none of the drawings shows any user with both of these functions.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Applicant's response to the objections to claims 6, 62, and 66 in the previous Office Action (mailed on 01 February 2007) is noted and appreciated. Applicant responded by canceling claim 6 and amending claims 62 and 66. Applicant's response overcomes the previous objections, which are presently withdrawn.

5. Applicant is advised that should **claims 19-23** be found allowable, **claims 28-32** will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). As a remedy, Examiner respectfully suggests the cancellation of claims 28-32.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 54-58, 60, 62, and 66** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In particular, notice the following limitations from independent claim 54:

"***a downstream combiner***...wherein the downstream combiner directs an analog video optical carrier to a bandpass input-output port that is connected by an optical fiber to an *analog broadcast receiver*;...

another downstream combiner...wherein an optical output of an *analog return transmitter* is connected by a separate optical transmission fiber to an input-output port of the another downstream combiner, which passes the analog return optical signal to the common port and then onto the another optical signal conductor;

a drop device coupled to a downstream output port of ***the downstream combiner***;...

an add device coupled to a downstream input port of the ***another downstream combiner***"

(emphasis Examiner's).

This "the downstream combiner" corresponds to BWDM Combiner 8 in Fig. 1 due to the detail about the analog broadcast receiver 13. The "another downstream combiner" corresponds to BWDM Combiner 21 in Fig. 1 due to the detail about the analog return transmitter 16. According to the claim language, the "drop device" (35 in Fig. 1) should be coupled to BWDM Combiner 8, and the "add device" (42 in Fig. 1) should be coupled to BWDM Combiner 21. However, such is not the case. According to Fig. 1, "drop device" (35 in Fig. 1) should be coupled to BWDM Combiner 21 (the "another downstream combiner"), and the "add device" (42 in Fig. 1) should be coupled to BWDM Combiner 8 ("the downstream combiner"). Therefore, these limitations introduce ***new matter*** to the claims.

As a remedy, Examiner respectfully suggests Applicant to amend claim 54 in the following ways:

"***a drop device*** coupled to a downstream output port of ***the another downstream combiner***;...

an add device coupled to a downstream input port of the ~~***another downstream combiner***~~"

(emphasis Examiner's).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 12, 19-25, 28-34, and 44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Giles (U.S. Patent No. 5,633,741) in view of Dail (U.S. Patent No. 5,864,748).

Regarding claim 12, Giles discloses:

A method (Fig. 9), comprising:

propagating a downstream signal (e.g., signal from 90 to 98) on an optical signal conductor (e.g., fiber between 98 and 100) from an upstream combiner (e.g., 98) to a downstream combiner (e.g., 100);

counter-propagating an upstream signal (e.g., signal from 91 to 100) on the optical signal conductor (e.g., fiber between 98 and 100) from the downstream combiner (e.g., 100) to the upstream combiner (e.g., 98), wherein the upstream signal includes a digital signal (col. 9, l. 27; col. 10, l. 35);

propagating another downstream signal (e.g., signal from 90 to 99) on another optical signal conductor (e.g., fiber between 99 and 101) from another upstream combiner (e.g., 99) to another downstream combiner (e.g., 101), wherein the another downstream signal includes a digital signal (col. 9, l. 27; col. 10, l. 35); and

counter-propagating another upstream signal (e.g., signal from 91 to 101) on the another optical signal conductor (e.g., fiber between 99 and 101) from the another downstream combiner (e.g., 101) to the another upstream combiner (e.g., 99).

Giles does not expressly disclose:

wherein the downstream signal includes an analog video broadcast signal; and

wherein the another upstream signal includes an analog return signal.

However, the use of downstream and upstream analog signals is known in the art, as exemplified by Dail (downstream analog and upstream analog in Fig. 2, col. 4, l. 5-8, 26-27). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ such analog signal channels in the method of the prior art of record. One of ordinary skill in the art would have been motivated to do this since Giles expressly discusses the consideration of analog transmission and cable TV

systems (Giles, col. 1, l. 43-47), and Dail provides a suitable example of analog transmission in a cable TV system that employs optical fiber communication technology (Dail, Fig. 2, abstract).

Regarding claim 19-23, Giles in view of Dail does not expressly disclose:

(claim 19) The method of claim 18, wherein the digital signal includes a packet switched signal.

(claim 20) The method of claim 19, wherein the packet switched signal includes a cell-switched signal.

(claim 21) The method of claim 20, wherein the cell-switched signal includes an asynchronous transfer mode digital data signal.

(claim 22) The method of claim 19, wherein the packet switched signal includes a frame switched signal.

(claim 23) The method of claim 22, wherein the cell-switched signal includes a synchronous transfer mode digital data signal.

However, all of these types of signals are common and well-known types of communication signals. Implementing the method of Giles in view of Dail with any or all of these types of communication signals simply present obvious variations of the basic method of Giles in view of Dail.

Regarding claim 24, Giles in view of Dail discloses:

The method of claim 19, further comprising wavelength demultiplexing (Giles, upper demultiplexer in 92 in Fig. 9) the upstream signal after propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

Regarding claim 25, Giles in view of Dail discloses:

The method of claim 19, further comprising adding data from a customer premises (Giles, adding data from any suitable data source in 91 for the signal from 91 to 100) to the upstream signal before propagating the upstream signal on the optical signal conductor from the downstream combiner to the upstream combiner.

Regarding claims 28-32, claims 28, 29, 30, 31, and 32 introduce limitations that correspond to the limitations introduced by claims 19, 20, 21, 22, and 23, respectively. Therefore, the recited limitations in claims 19-23 read on the corresponding limitations in claims 28-32.

Regarding claim 33, Giles in view of Dail discloses:

The method of claim 28, further comprising wavelength multiplexing (Giles, the channel/wavelength labels for the middle two lasers in 90 should be switched with each other, and so would show wavelength multiplexing of f1 and f3 channels/wavelengths for the signal from 90 to 99) the another downstream signal before propagating the another downstream signal on the another optical signal conductor from the another upstream combiner to the another downstream combiner.

Regarding claim 34, Giles in view of Dail discloses:

The method of claim 28, further comprising dropping data to a customer premises (Giles, dropping data to any suitable receiver in 93 for the signal from 90 to 99) from the another downstream signal after propagating the another downstream signal on the another optical signal conductor from the second upstream combiner to the another downstream combiner.

Regarding claim 44, Giles in view of Dail discloses:

A process of operating a cable access television network comprising the method of claim 12 (Giles, col. 1, l. 43-47).

11. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over Giles in view of Dail as applied to the claims above, and further in view of Kim et al. (U.S. Patent No. 6,445,472 B1, hereinafter "Kim") and Schemmann et al. (U.S. Patent Application Publication No. 2006/0165413 A1, hereinafter "Schemmann").

Regarding claim 42, Giles in view of Dail discloses:

The method of claim 12, further comprising broadcasting (Dail, col. 4, l. 7-8) at least a portion of the downstream signal to a plurality of users (Dail, "broadcasting" strongly suggests "a plurality of users").

Giles in view of Dail does not expressly disclose:

conveying a signal from at least one of a plurality of users to an input port of the another downstream combiner as the another upstream signal.

However, such a configuration is known in the art, as exemplified by Kim (Fig. 2, conveying an upstream signal from at least one of the users to an input port of 116). At the time the invention was made,

it would have been obvious to one of ordinary skill in the art to implement such a configuration for the method of the prior art of record. One of ordinary skill in the art would have been motivated to do this since the prior art of record is relatively silent about how each user might receive and transmit information through the system. Kim speaks into this silence with a typical example (col. 4, l. 1-3).

Giles in view of Dail and Kim does not expressly disclose:

conveying a signal from at least one of ***the*** plurality of users to an input port of the another downstream combiner as the another upstream signal (emphasis Examiner's).

That is, the prior art of record does not expressly disclose that the plurality of users of Giles in view of Dail is the same plurality of users of Giles in view of Dail and Kim. More exactly, the plurality of users of Giles in view of Dail receives broadcast signals, but Giles in view of Dail and Kim does not expressly disclose the same. Nonetheless, the incorporation of broadcasting signals to a plurality of users that also conveys an upstream signal is known in the art, as exemplified by Schemmann (Fig. 1, broadcast signals of 106 to 134, which also conveys an upstream signal through 705). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to incorporate broadcasting signals with the same plurality of users of Giles in view of Dail and Kim. One of ordinary skill in the art would have been motivated to do this since Giles and Dail both discuss the application of cable TV systems (Giles, col. 1, l. 43-47; Dail, abstract), which are extremely well known to conventionally include broadcasting signals.

12. **Claim 43** is rejected under 35 U.S.C. 103(a) as being unpatentable over Giles in view of Dail as applied to the claims above, and further in view of Shutterly (U.S. Patent No. 4,662,715).

Regarding claim 43, Giles in view of Dail does not expressly disclose:

The method of claim 12, further comprising distributing at least a portion of the another downstream signal to a plurality of users and conveying a signal from at least one of the plurality of users to an input port of the downstream combiner as the upstream signal.

These limitations correspond to the configuration of the add and drop buses with the associated users in Applicant's Fig. 1. However, this configuration is known in the art, as exemplified by Shutterly

(buses with couplers and splitters in Fig. 2). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement this configuration of buses in the method of the prior art of record. One of ordinary skill in the art would have been motivated to do this since the prior art of record is relatively silent about how each user might receive and transmit information through the system. Shutterly speaks into this silence with a suitable example (col. 4, l. 1-3) that avoids the signal loss associated with other possible methods for signal distribution (col. 2, l. 61-63).

13. **Claims 54, 57, and 58** are rejected under 35 U.S.C. 103(a) as being unpatentable over Giles in view of Dail and Shutterly as applied to the claims above, and further in view of Cubukciyan et al. (U.S. Patent No. 5,289,554, hereinafter "Cubukciyan").

Regarding claim 54, Giles in view of Dail and Shutterly discloses:

An apparatus (Giles, Fig. 9), comprising:

an upstream combiner including an upstream bi-directional common port (Giles, e.g., 98);

an optical signal conductor coupled to the upstream bi-directional common port of the upstream combiner (Giles, e.g., fiber between 98 and 100);

a downstream combiner including a downstream bi-directional common port (Giles, e.g., 100) coupled to the optical signal conductor (Giles, e.g., fiber between 98 and 100), wherein the downstream combiner directs an analog video optical carrier (Dail, downstream analog in Fig. 2, col. 4, l. 5-8, 26-27) to a bandpass input-output port that is connected by an optical fiber (Giles, fiber(s) to receivers in 93 in Fig. 9) to an analog broadcast receiver (an upper receiver in 93 in Fig. 9 of Giles for receiving downstream analog of Dail);

another upstream combiner including another upstream bi-directional common port (Giles, e.g., 99);

another optical signal conductor coupled to the another upstream bi-directional common port of the another upstream combiner (Giles, e.g., fiber between 99 and 101);

another downstream combiner including another downstream bi-directional common port (Giles, e.g., 101) coupled to the another optical signal conductor (Giles, e.g., fiber between 99 and 101), wherein an optical output of an analog return transmitter (a transmitter in 91 in Fig. 9 of Giles for transmitting

upstream analog of Dail) is connected by a separate optical transmission fiber (Giles, fiber(s) from 91 in Fig. 9) to an input-output port of the another downstream combiner (Giles, e.g., 101), which passes the analog return optical signal to the common port and then onto the another optical signal conductor (e.g., signal from 91 to 101 of Giles with the upstream analog of Dail);

a drop device coupled to a downstream output port of the another downstream combiner (Shutterly, e.g., 59 in Fig. 2);

a customer premises equipment digital receiver input coupled to the drop device (Shutterly, 137 in Fig. 2), the customer premises equipment digital receiver input including an input optical connector (Shutterly, connection from 137 to 80);

an add device coupled to a downstream input port of the downstream combiner (Shutterly, 46 in Fig. 2); and

a customer premises equipment digital receiver output coupled to the add device (Shutterly, 132 in Fig. 2), the customer premises equipment digital receiver output including an output optical connector (Shutterly, connection from 78 to 132).

Giles in view of Dail and Shutterly does not expressly disclose:

wherein the input optical connector and the output optical connector define physically different, non-interchangeable form factors.

However, such form factors for an input optical connector and an output optical connector are known in the art, as shown by Cubukciyan (notice the two physically different, non-interchangeable form factors at the end of input and output connectors 4 in Fig. 1). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ such form factors for the connectors of the prior art of record. One of ordinary skill in the art would have been motivated to do this since they provide suitable connections for a transceiver (Cubukciyan, col. 1, l. 47), and the connectors of the prior art of record are employed by a transceiver (Shutterly, "terminal devices" in Fig. 2 that transmit and receive, i.e., transceivers).

Regarding claim 57, Giles in view of Dail, Shutterly, and Cubukciyan discloses:

The apparatus of claim 54, further comprising a wavelength division multiplexer (Giles, the channel/wavelength labels for the middle two lasers in 90 should be switched with each other, and so would show wavelength multiplexing of f1 and f3 channels/wavelengths for the signal from 90 to 99) coupled to an upstream input port of the another upstream combiner.

Regarding claim 58, Giles in view of Dail, Shutterly, and Cubukciyan discloses:

The apparatus of claim 54, further comprising a wavelength division demultiplexer (Giles, lower demultiplexer in 92 in Fig. 9) coupled to an upstream output port of the another upstream combiner.

14. **Claims 55, 56, 60, 62, and 66** are rejected under 35 U.S.C. 103(a) as being unpatentable over Giles in view of Dail, Shutterly, and Cubukciyan as applied to the claims above, and further in view of Atlas (U.S. Patent No. 6,097,533).

Regarding claims 55 and 56, Giles in view of Dail, Shutterly, and Cubukciyan does not expressly disclose:

(claim 55) The apparatus of claim 54, further comprising an upstream input optical ***isolator*** coupled to an upstream input port of the another upstream combiner and an upstream output optical ***isolator*** coupled to an upstream output port of the another upstream combiner.

(claim 56) The apparatus of claim 54, further comprising a downstream input optical ***isolator*** coupled to a downstream input port of the another downstream combiner and a downstream output optical ***isolator*** coupled to a downstream output port of the another downstream combiner.

However, optical isolators are known to be extremely common optical elements. Notice the use of optical isolators in Atlas (120 and 122 in Fig. 16) to produce combiners/circulators (110 in Fig. 16). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ optical isolators in the combiners/circulators of the prior art of record (Giles, 98-101 in Fig. 9). One of ordinary skill in the art would have been motivated to do this since the prior art of record is relatively silent about how to exactly implement the combiners/circulators of the prior art of record (Giles, 98-101 in Fig. 9). Atlas speaks into this silence with further details about a suitable implementation for these combiners/circulators of the prior art of record (Atlas, Fig. 16, col. 12, l. 59 – col. 13, l. 15).

Regarding claim 60, Giles in view of Dail, Shutterly, Cubukciyan, and Atlas discloses:

The apparatus of claim 54, further comprising an optical isolator coupled to the drop device (120 in Fig. 16 of Atlas in combiner/circulator 101 in Fig. 9 of Giles).

Regarding claim 62, Giles in view of Dail, Shutterly, Cubukciyan, and Atlas discloses:

The apparatus of claim 54, further comprising an optical isolator coupled to the add device (122 in Fig. 16 of Atlas in combiner/circulator 100 in Fig. 9 of Giles).

Regarding claim 66, Giles in view of Dail, Shutterly, Cubukciyan, and Atlas discloses:

A cable access television network, comprising the apparatus of claim 54 (Giles, col. 1, l. 43-47).

Response to Arguments

15. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments are based on the new scope of the invention(s) disclosed by the newly amended claims. Notice the new ground(s) of rejection based on the teachings of Giles, Dail, Kim, Schemmann, Shutterly, Cubukciyan, and Atlas to address this new scope of the invention(s) disclosed by the newly amended claims. Accordingly, Applicant's arguments are moot.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DSK

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER